

TOUR ICE (PWS# 4010014)
SOURCE WATER ASSESSMENT FINAL REPORT

May 21, 2001



State of Idaho
Department of Environmental Quality

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Under the Federal Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. The Idaho Department of Environmental Quality is completing the assessments for all Idaho public drinking water systems. The assessment for your particular drinking water source is based on a land use inventory within a 1,000 foot radius of your drinking water source, sensitivity factors associated with the source and characteristics associated with either your aquifer or watershed in which you live.

This report, *Source Water Assessment for Public Water System (PWS) #4010014 located in Meridian, Idaho*, describes the public drinking water system, the associated potential contaminant sources located within a 1,000' boundary around the drinking water source, and the susceptibility (risk) that may be associated with any potential contaminants. This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this system. **The results should not be used as an absolute measure of risk and is not intended to undermine the confidence in your water system.**

The Tour Ice drinking water system consists of a single well, which rated a high susceptibility to inorganic compounds, volatile organic compounds, synthetic organic compounds, and microbial contaminants. The predominant land use in the region is irrigated agriculture. This fact combined with the numerous potential contaminant sources within the designated source water area result in the high susceptibility scores for the water system. Areas of elevated agricultural practices are potentially vulnerable to nitrates and organic compounds due to the application of fertilizers and pesticides on the adjacent fields. Furthermore, the well resides within a nitrate Group 1 Priority Area, which could increase the possibility of groundwater contamination. As a result, the land use score was increased.

DEQ was unable to determine the date the well was drilled or obtain a well log for the system, which resulted in an increased well construction score. In addition, regional soil information indicates the presence of well-drained soils. In the unlikely event of a spill or release of pollutants near the well bore, well-drained soils, in general, provide less protection and allow for a more rapid downward movement of contaminants.

The initial computer generated contaminant source inventory identified several potential contaminant sources within the 1,000-foot boundary. These sites have been summarized and included in Table 1. In addition, Fairview Avenue passes directly through the delineation area. For the purposes of the susceptibility analysis, Fairview Avenue was considered a possible origin of contamination since it serves as an important transportation thoroughfare for the region. A copy of the completed susceptibility analysis for your system along with a map showing any potential contaminant sources is included with this summary.

Table 1.

| SITE # | Source Description | Source of Information | Potential Contaminants |
|--------|--------------------------------|-----------------------|------------------------|
| 1, 4 | Fence Manufacturers | Business Mailing List | IOC, VOC, SOC |
| 2 | Gas Station | Business Mailing List | IOC, VOC, SOC |
| 3, 6 | RCRIS site (Dry Cleaners) | Database Search | IOC, VOC |
| 5 | RCRIS site | Database Search | IOC, VOC, SOC |
| 7 | Commercial Building/Restaurant | Enhanced Inventory | IOC, VOC |
| 8 | Medical Supplier | Enhanced Inventory | IOC, SOC, Microbial |

IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

For Tour Ice, source water protection activities should focus on implementation of practices aimed at minimizing leaching chemicals associated with the potential contaminant sources within the designated source water area. Source water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term.

For assistance in developing drinking water protection strategies please contact the DEQ-Boise Regional Office at 208-373-0550.

POTENTIAL CONTAMINANT INVENTORY LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as **ASuperfund@** is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

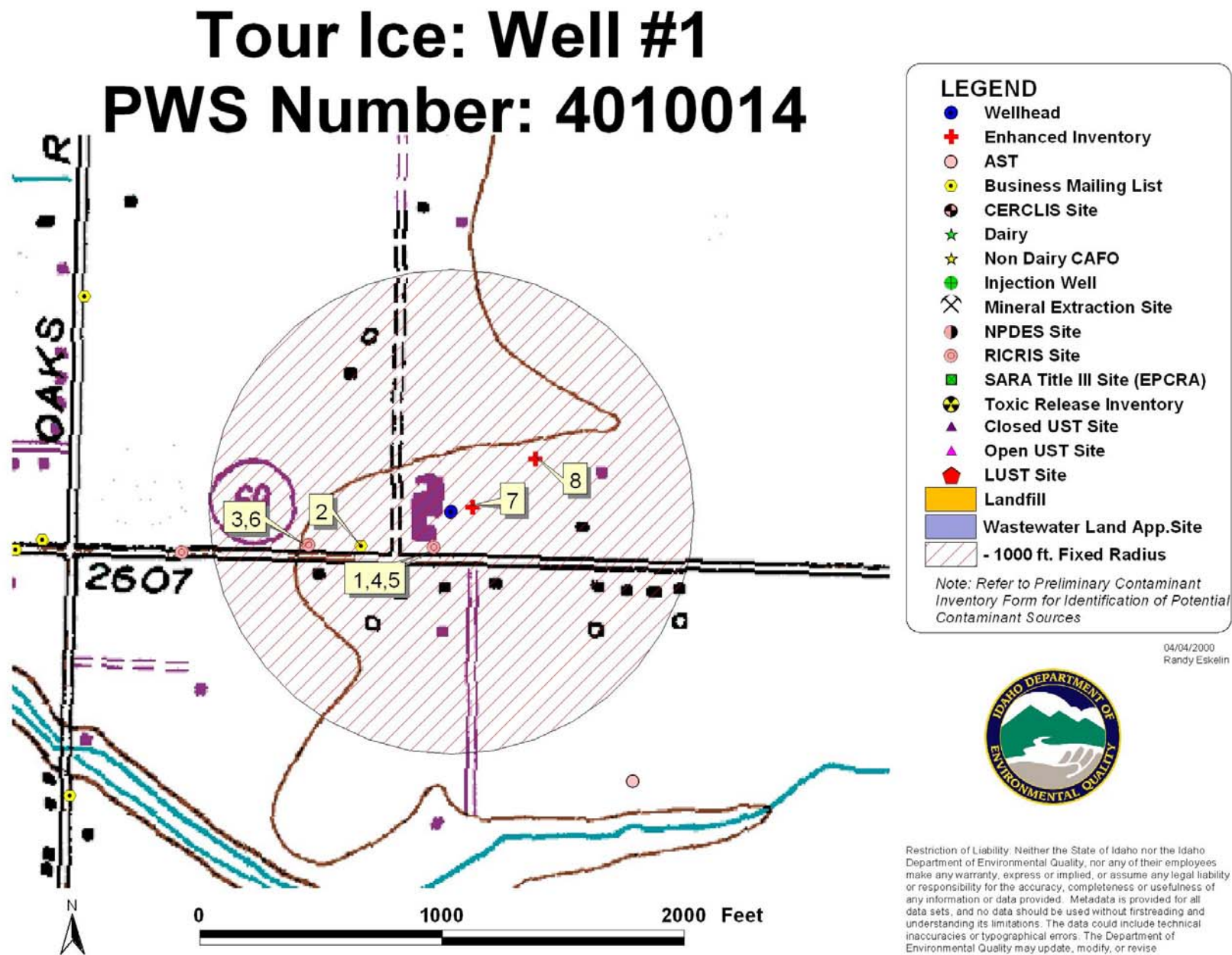
Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.

Figure 1. Tour Ice, Meridian Delineation



The final scores for the susceptibility analysis were determined using the following formulas:

- 1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.27)
- 2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.375)

Final Susceptibility Scoring:

- | | |
|--------|-------------------------|
| 0 - 5 | Low Susceptibility |
| 6 - 12 | Moderate Susceptibility |
| ≥ 13 | High Susceptibility |

Ground Water Susceptibility Report

Public Water System Name :

Public Water System Number TOUR ICE
4010014

Well# : WELL #1

5/21/01 9:11:43 AM

| 1. System Construction | | SCORE | | | |
|--|--------------------|--------------|--------------|--------------|--------------------|
| Drill Date | circa 1970 | | | | |
| Driller Log Available | NO | | | | |
| Sanitary Survey (if yes, indicate date of last survey) | YES | 1996 | | | |
| Well meets IDWR construction standards | NO | 1 | | | |
| Wellhead and surface seal maintained | YES | 0 | | | |
| Casing and annular seal extend to low permeability unit | NO | 2 | | | |
| Highest production 100 feet below static water level | NO | 1 | | | |
| Well located outside the 100 year flood plain | YES | 0 | | | |
| Total System Construction Score | | 4 | | | |
| 2. Hydrologic Sensitivity | | | | | |
| Soils are poorly to moderately drained | NO | 2 | | | |
| Vadose zone composed of gravel, fractured rock or unknown | YES | 1 | | | |
| Depth to first water > 300 feet | NO | 1 | | | |
| Aquitard present with > 50 feet cumulative thickness | NO | 2 | | | |
| Total Hydrologic Score | | 6 | | | |
| 3. Potential Contaminant / Land Use - ZONE 1A | | IOC Score | VOC Score | SOC Score | Microbial Score |
| Land Use Zone 1A | IRRIGATED CROPLAND | 2 | 2 | 2 | 2 |
| Farm chemical use high | NO | 0 | 0 | 0 | |
| IOC, VOC, SOC, or Microbial sources in Zone 1A | NO | NO | NO | NO | NO |
| Total Potential Contaminant Source/Land Use Score - Zone 1A | | 2 | 2 | 2 | 2 |
| Potential Contaminant / Land Use - ZONE 1B | | | | | |
| Contaminant sources present (Number of Sources) | YES | 7 | 6 | 5 | 2 |
| (Score = # Sources X 2) 8 Points Maximum | | 8 | 8 | 8 | 4 |
| Sources of Class II or III leacheable contaminants or 4 Points Maximum | YES | 4 | 4 | 0 | |
| Zone 1B contains or intercepts a Group 1 Area | YES | 4 | 4 | 0 | |
| Land use Zone 1B Greater Than 50% Irrigated Agricultural Land | | 2 | 0 | 0 | 0 |
| | | 4 | 4 | 4 | 4 |
| Total Potential Contaminant Source / Land Use Score - Zone 1B | | 18 | 16 | 12 | 8 |
| Cumulative Potential Contaminant / Land Use Score | | 20 | 18 | 14 | 10 |
| 4. Final Susceptibility Source Score | | 15 | 15 | 14 | 14 |
| 5. Final Well Ranking | | High | High | High | High |